

REMARKS

This Amendment After Final is filed in response to the Final Office Action mailed Oct. 29, 2007. The Applicant respectfully requests reconsideration of the rejections presented therein.

Claims 1-35 and 41-44 are pending in the case.

No claims have been added or amended

Office Action Summary

The Applicant notes that the listing of pending claims on the Office Action Summary sheet, as well as at the top of page 2 of the Office Action, appear to omit pending claim 35. Accordingly, the Applicant brings this omission to the Examiner's attention.

Claim Rejections – 35 U.S.C. §103

At paragraphs 1-3 of the Office Action, claims 1, 2, 4, 6, 7, 9, 11, 13, 17 and 19 and 41-44 were rejected under 35 U.S.C. §103(a) over Azuma et al., U.S. Patent No. 6,430,150 (hereinafter "Azuma") in view of Vaman et al., U.S. Patent No. 6,011,780 (hereinafter "Vaman").

The Applicant's claim 1, representative in part of the other rejected claims, sets forth:

1. A method for operating a node in a computer network, the node connected to other nodes by links, comprising:
 - determining a path to a destination, the path including one or more links;
 - determining at least one alternate path having at least some of its one or more links differing from the links of the path;
 - reserving resources for said at least one alternate path;***
 - subsequent to reserving resources, detecting a link failure on the path;*** and
 - rerouting traffic on said at least one alternate path in case of a link failure.

Azuma discloses a technique for restoring service across a network when a link or node fails. “In the event of a failure in the link or the node, the node adjacent to the location of the failure broadcasts a message to the other nodes in the network to indicate where the failure has occurred. Using the received message, each node performs the computation for finding alternate paths so as to restore the telecommunication path for itself.” *See* col. 4, line 67 to col. 4, lines 6 and col. 2 lines 3-21. After a link failure and computation of an alternate path, a “cross-connection phase” is initiated where resources are reserved along the alternate path, and service switched to it. *See* col. 4, line 62 to col. 5, line 8.

Vaman discloses a technique for restoring a virtual path in response to a resource failure. Vaman begins by “setting a primary path and a secondary path between nodes of a network.” *See* col. 8, lines 17-20. “The primary path has the necessary bandwidth reserved for the connection. The secondary path **does not** reserve any bandwidth but serves as a logical assignment.” *See* col 10, lines 22-24 (emphasis added). That is, the secondary path “**does not have** any bandwidth reservation” until later. *See* col. 10, lines 63-66. “When a particular domain though with a primary path is established either experiences congestion or has a resource failure, then service provisioning is switched to the domain that provides the secondary path. Management actions are needed...for bandwidth reservation on the secondary path.” *See* col. 10, lines 28-34. Thus, these reservations occur subsequent to a failure.

The Applicant respectfully urges that neither Azuma, nor Vaman teach or suggest the Applicant’s claimed “*reserving resources for said at least one alternate path*” and “**subsequent to reserving resources, detecting a link failure on the path.**”

Unlike conventional techniques, the Applicant reserves resources for at least one alternate path **prior to** detecting a failure along the primary path. As such, failure recovery may occur in a more rapid manner than with conventional techniques, which have generally only reserved backup path resources after a failure has already occurred.

There appears to be agreement that Azuma does not disclose this aspect of the Applicant's claims. *See* Office Action page 4 (stating "Azuma fails to clearly mention the method of *subsequent to reserving resources, detecting a link failure on the path*").

The Office Action then turns to Vaman. However, a close reading of Vaman reveals Vaman's system actually functions similarly to that of Azuma, suffering from the same shortcomings as Azuma. Vaman specially states "[t]he secondary path **does not** reserve any bandwidth but serves as a logical assignment." *See* Vaman col 10, lines 22-24 (emphasis added). Only after a failure along the primary path are certain "management actions" used to reserve bandwidth on the secondary path. *See* Vaman col. 10, lines 28-34. Thus, if anything, Vaman teaches away from what the Applicant claims and would lead one of skill in the art astray from the Applicant's innovations.

Accordingly, the Applicant respectfully urges that the combination of Azuma and Vaman is legally insufficient to make obvious the present claims under 35 U.S.C. §103(a) because of the absence of the Applicant's claimed novel "*reserving resources for said at least one alternate path*" and "**subsequent to reserving resources, detecting a link failure on the path.**"

The Applicant further respectfully directs the Examiner's attention to dependent claims 41 and 43 which further describe the claimed reserving of resources. When such claims are read in combination with the independent claims from which they depend, they clearly stand in sharp contrast to the teachings of Azuma and Vaman.

At paragraph 4-5 of the Office Action, claims 3, 5, 8, 10, 12, 14-16, 18, and 20-35 were rejected under 35 U.S.C. §103(a) over Azuma in view of Katzela et al., U.S. Patent No. 5,872,773 (hereinafter Katzela) in further view of Vaman.

Claims 3, 5, 8, 10, 12, 14, 18, and 20 are dependent claims that dependent from independent claims believed to be allowable for the reasons discussed above. Accord-

ingly, claims 3, 5, 8, 10, 12, 14, 18 are believed to be allowable due to their dependency, as well as for other separate reasons.

The Applicant's claim 21, representative in part of claims 15-16 and 21-35, sets forth:

21. A method of non-disruptive packet switching in a network having nodes interconnected with transmission trunks, said method comprising:

pre-selecting at least on alternate path for each trunk;

reserving connections at each node to make said at least one alternate path;

reserving bandwidth resources to transmit packets on said at least one alternate path;

subsequent to the reserving connections and reserving resources, detecting a failure of a particular trunk;

switching the path of a packet from said particular trunk, in response to failure of said particular trunk, to said at least one alternate path; and

re-selecting at least one new alternate path for each trunk in response to user traffic, network resources, and quality of service changes.

Katzela simply discloses a wireless communications network where cells are routed according to virtual path identifiers (VPIs). *See* abstract.

The Applicant respectfully urges that the combination of Azuma, Katzela and Vaman does not teach or suggest the Applicant's claimed "***reserving bandwidth resources to transmit packets on said at least one alternate path***" and "***subsequent to the reserving connections and reserving resources, detecting a failure of a particular trunk.***"

As discussed above, neither Azuma, nor Vaman reserve bandwidth resources for an alternate path **prior to** detecting a failure on the primary path. Katzela in no way remedies the deficiencies of Azuma and Vaman, being silent on the topic.

Accordingly, the Applicant respectfully urges that the combination of Azuma, Katzela and Vaman is legally insufficient to make obvious the present claims under 35 U.S.C. §103 because of the absence of the Applicant's claimed novel "*reserving bandwidth resources to transmit packets on said at least one alternate path*" and "*subsequent to the reserving connections and reserving resources, detecting a failure of a particular trunk.*"

Should the Examiner believe telephonic contact would be helpful in the disposition of this Application, the Examiner is encouraged to call the undersigned attorney at (617) 951-2500.

In summary, all the independent claims are believed to be in condition for allowance and therefore all dependent claims that depend there from are believed to be in condition for allowance. The Applicant respectfully solicits favorable action.

Please charge any additional fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,



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